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Method of, and apparatus for, producing (cigarette) packs

Patent claims

1. Method of producing packs (10), in particular cigarette packs, which have a separate blank made of thin material as a pack insert – insert blank (25) – in particular coupon, revenue stamp or the like, the insert blank (25) being arranged in the pack (10) and being enclosed by at least one pack blank (11),
5 **characterized in that** the insert blank (25) is fixed at least temporarily on the pack (10) or on a sub-pack or on the pack contents by electrostatic charging of the material.
2. Method according to Claim 1, **characterized in that** the pack (10) or sub-pack or the pack contents, in particular a cigarette block (14) is or are electrostatically
10 charged before and/or during and/or after the operation of applying or positioning the insert blank (25).
3. Method according to Claim 1 or 2, **characterized in that** the pack (10) is provided with the insert blank (25), and electrostatically charged, in the region of a pack conveyor, or of a folding subassembly, in particular in the region of a
15 rotationally driven folding turret (16), such that the insert blank (25) is fixed at least temporarily on the pack (10) by electrostatic charging as said pack is transported (further).

4. Method according to Claim 1, **characterized in that** the insert blank (25) is applied to a top side of the pack (10) or sub-pack, or of the pack contents – cigarette block (14) – and a unit which is formed in this way is subjected to electrostatic action from above.
- 5 5. Method according to Claim 1, **characterized in that** the insert blank (25) is positioned on the cigarette block (14), as pack contents, and is then introduced, with the cigarette block (14), into a not yet finished pack (10), in the region of a pushing-in station (33) of the folding turret (16), and electrostatically charged in this region.
- 10 6. Method according to Claim 1, **characterized in that**, during production of a cigarette pack (10) of the hinge-lid-box type, the cigarette block (14), as pack contents with an insert blank (25) positioned on the top side and a collar (15) resting, in part, on the insert blank (25), is subjected to electrostatic charging essentially in the region of the insert blank (25) outside the collar (15).
- 15 7. Method according to Claim 1, **characterized in that** an insert blank (25) which is formed in a number of layers, in particular is folded in zigzag form, is electrostatically charged such that the layers of the insert blank (25), as a result of the electrostatic charging, butt closely against one another and are fixed on the pack (10) or on the pack contents – cigarette block (14).
- 20 8. Method according to Claim 1, **characterized in that** an (elongate) insert blank (25) is electrostatically charged in each case at two end regions.
9. Apparatus for producing packs (10), in particular cigarette packs, which have a separate blank made of thin material as a pack insert – insert blank (25) – in particular coupon, revenue stamp or the like, it being possible for the insert blank
25 (25) to be fed by a coupon dispenser (26) and positioned on the pack (10) or on pack contents, **characterized in that** the insert blank (25) or the pack (10) or the pack contents – cigarette block (14) – can be electrostatically charged by charging electrodes (28, 29) in the region where the insert blank (25) is applied to the pack (10), or the pack contents.
- 30 10. Apparatus according to Claim 9, **characterized in that** at least one charging electrode (28, 29) is arranged above a conveyor for packs (10) or pack contents – cigarette block (14) – to be precise in the region of the coupon dispenser (26) and/or in the region of a following pack conveyor or folding turret (16).
- 35 11. Apparatus according to Claim 9 or 10, **characterized in that** at least one charging electrode (28, 29) is positioned above a folding turret (16), which has

upwardly open pockets (17, 18) for packs (10), in the region of a pushing-in station (33) for pack contents – cigarette block (14) – with insert blank (25) and, if appropriate, the collar (15).

- 5 12. Apparatus according to Claim 9, **characterized in that** two charging electrodes (28, 29) are positioned in the region of a coupon dispenser (26) for transferring insert blanks (25) to packs (10) or pack contents, preferably such that the two charging electrodes (28, 29) are positioned on both sides of an end part of the coupon dispenser (26) and are directed towards exposed end regions of the insert blank (25).

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List of designations

- | | |
|-------------------------|----------------------|
| 10 Pack | 36 Conveying strand |
| 11 Pack blank | 37 Carry-along means |
| 12 Box part | 38 Transfer wheel |
| 13 Lid | 39 End piece |
| 14 Cigarette block | 40 Wrapping station |
| 15 Collar | 41 Pack path |
| 16 Folding turret | 42 Carry-along means |
| 17 Pocket | |
| 18 Pocket | |
| 19 Side tab | |
| 20 Corner tab | |
| 21 Lid end wall | |
| 22 Lid front wall | |
| 23 Collar path | |
| 24 Collar front wall | |
| 25 Insert blank | |
| 26 Coupon dispenser | |
| 27 Pushing-in mechanism | |
| 28 Charging electrode | |
| 29 Charging electrode | |
| 30 Electric field | |
| 31 Box front wall | |
| 32 Block path | |
| 33 Pushing-in station | |
| 34 Rear wall | |
| 35 Belt conveyor | |